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In this presentation, all \$ dollar amounts are in Singapore dollars unless otherwise specified.

#### **AEM Corporate Profile**

AEM is a global leader in the fast growing **Test 2.0** market, delivering application-specific intelligent system test and handling solutions for semiconductor and electronics companies serving the advanced computing, 5G, and AI markets.





#### Leader in Fast Growing Test 2.0 Market

Test 2.0 growth is driven by advanced packaging & integrated logic.
AEM has over **1,000** Test 2.0 tools in production



#### Full Stack Technology

Delivering **composable** technologies and solutions for advanced, integrated semiconductor or test needs



# Deploy at Scale

Critical delivery capabilities giving our customers a reduced time to market



#### 2016-2022\* Rev. CAGR

49%

1H2022 Results Revenue: **\$\$540.5M** PBT: **\$\$102.0M** FY2022 Guidance **\$\$750M to \$\$800M** 



#### Listed on SGX

Market Cap: ~S\$1.4B\* AEM Holdings Ltd. (SGD: AWX) (USD: XWA)

\* As at 12 Aug 2022

\* FY2022 guidance midpoint

#### **Industry Megatrends and Test Challenges**

Driving Secular Growth In Test



Industry Megatrends

# 5G 5G 5G

# **5G**High-speed, low-latency, and omnipresent connectivity opens a vast array of new applications



Artificial Intelligence Growth of AI enables new business models and unlocks increasing value from data



Proliferation of IoT enabled devices and the cloudification of data requires increased power in the cloud and at the edge



Automotive
Electrification of vehicles,
introduction of
autonomous driving
capabilities, and
digitalization





**Test Challenges** 



and use cases

Increasing
Device
Complexity



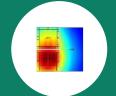
Increasing Power Requirement



Adoption of Advanced Packaging



Increasing Test Development Times



Increasing Thermal Challenges



Increasing Test Coverage Requirements

Device Test Times Increasing



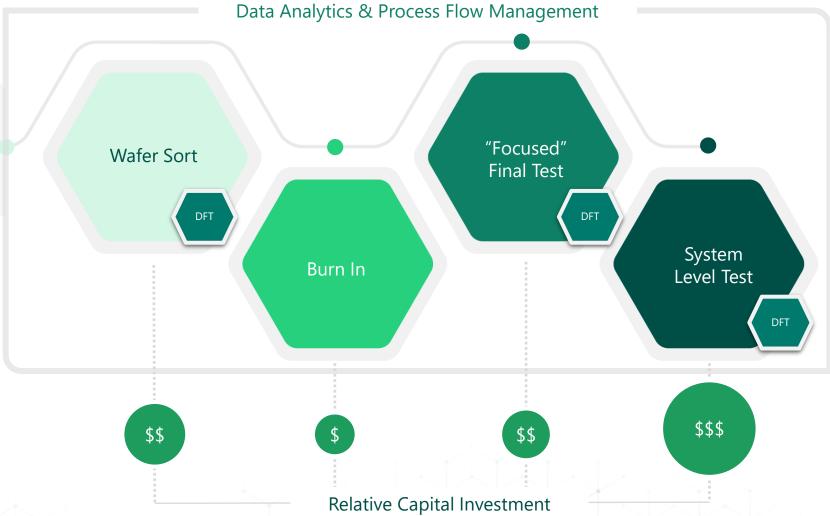
Growth In Test Spend

#### **AEM's Test 2.0 Vision**

ΛEΜ

Delivers The Paradigm Shift That Resets The Cost of Test Curve

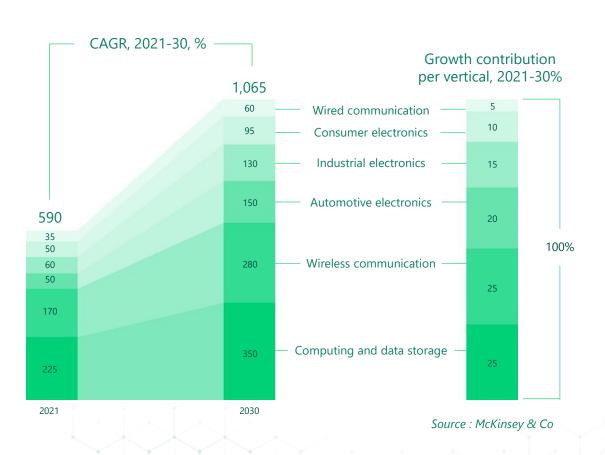
> Future Paradigm: Wafer Sort Test 2.0



# **Industry Megatrends** are Driving Growth in Demand <u>8X</u>



# Global Semiconductor Market Value By Vertical, Indicative, US\$ Billion



# A Growth Scenario for AEM's Test 2.0 Solution Set



Market share of logic / integrated logic devices will grow **1500 basis points** from 2021 to 2030



Test spend for logic / integrated logic devices is higher, and will increase to about **4%** of device revenue by 2030



SLT spend as a share of logic test spend is about 25% in 2021, and is expected to grow to **50%** by 2030

**Test 2.0** market (in-house & merchant) could grow **8x** over next 8 years

Source: AEM estimates

### **Full Stack Solution**

Composed for the Customer's Modern Test Needs









#### **HANDLERS**

Wafer, Packaged, MEMS, Module, & System Level Test



Test & Instrumentation Solutions

Software Integration

Test Cell Automation

Device Sockets



Load Boards

# Organic R&D

# **Test 2.0 And Our Composable Solutions** are Enabled by AEM's Core Capabilities



#### TECHNOLOGY

#### **Test Handlers**





Test Cell Automation

Final Test Handlers

#### Thermal Arrays / Kits / Sockets



System Level Test Consumables

#### **Semiconductor Testers**







Intelligent **Load Boards** 

#### **Application Specific Wafer Probers**



Humidity, Pressure, Gyro, Motion, Cryogenic, ATC

#### **Software Integration**



DELIVERY

#### **Interconnect Testers**





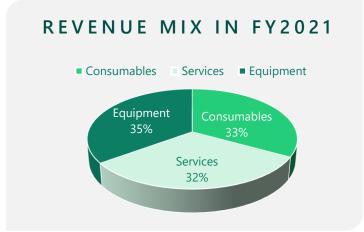
#### **AEM's Business Model**





#### **Business Model**

- Growing recurring demand for kits, pans, and spares underpinned by a growing install base of >1,000 Test 2.0 tools
- Grow share of wallet of the overall consumable stack within each tool





#### **Benefits**

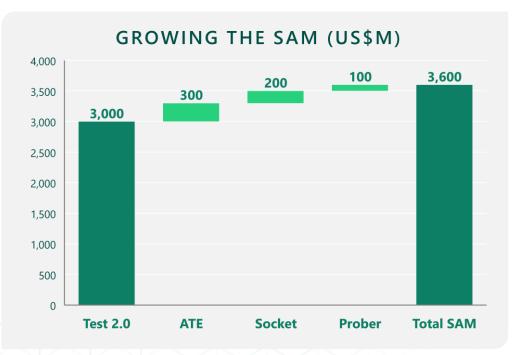
- ✓ Mitigate volatile equipment sales
- ✓ Bolster profitability with higher margin consumables
- ✓ Increase customer intimacy



#### ✓ AEM's SAM for Test 2.0: US\$3.0B

#### **✓ Growing the SAM by expanding capabilities**

- ATE: US\$300M out of total US\$5,400M market
- Socket: US\$200M out of total US\$1,500M market
- Prober: US\$100m out of total US\$1,100M market



Source : AEM estimates



# **AEM Capital Allocation Strategy**

Invest in the **Business** 

R&D, Talent, Strengthen Competitive Advantages Strategic M&A

Gain scale in new markets, expediate key account wins

**Shareholder Returns** 

Buybacks and Dividend

C O N F I D E N T I A L



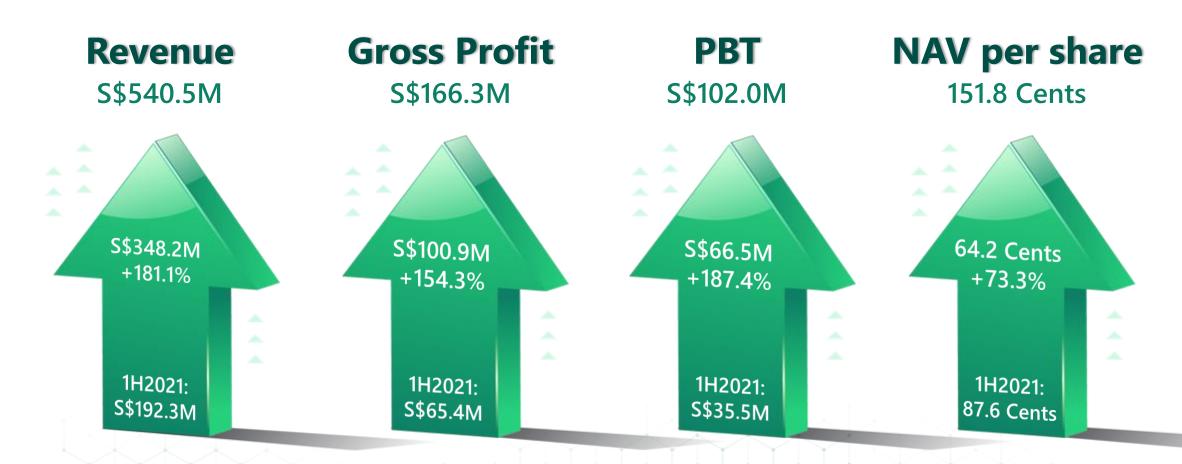
- Delivered highest half year revenue and PBT in AEM's history at \$\$540.5M (+181% y-o-y) and \$\$102.0M (+187% y-o-y) respectively
- Acquired majority control of Nestek Korea Co., Ltd. ("Nestek"), a South Korean company that specializes in the design and manufacture of pins and sockets
- Two new customer wins in high-performance computing / artificial intelligence and application processors for mobility
- Reported EPS of 26.8 SG cents in 1H2022, a 152% y-o-y increase from 10.6 SG cents in 1H2021. Proposed interim dividend of 6.7 SG cents per share, approximately 25% payout
- FY2022 revenue guidance for the Group revised to between S\$750M and S\$800M

# **1H2022 Financial Highlights**

Best half yearly results recorded



# 1H2022 vs 1H2021

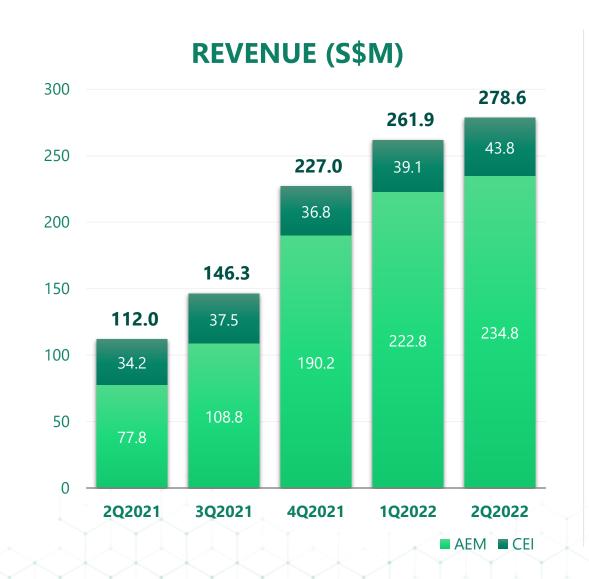


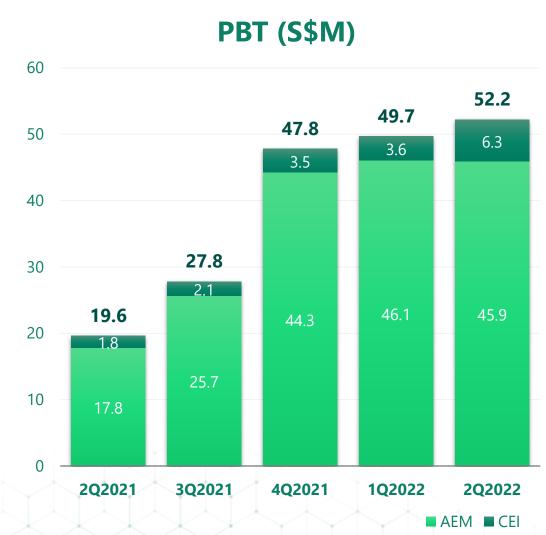
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## **Quarterly Revenue and PBT**

Continuing the momentum of strong quarterly revenue and profits



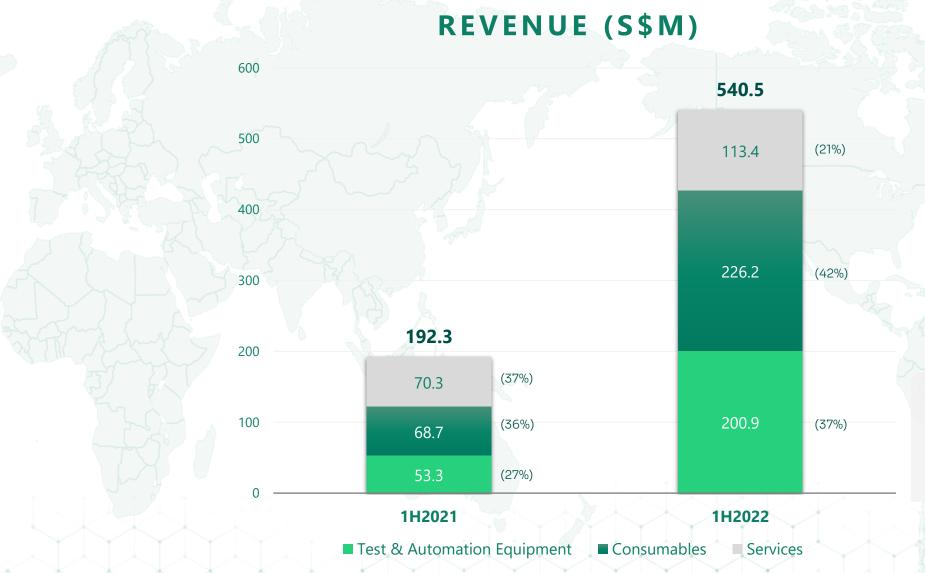




#### **Revenue Mix**

Both Consumables and Equipment revenue increased by more than 3 times





1H2021 comprises 3.5 months of CEI revenue only

Services comprises manufacturing, engineering, and FSE revenue

#### **A Robust Balance Sheet**

Sound capital structure – Debt/Equity ratio of 0.1X NAV per share increased mainly due to \$83M profits earned for 1H2022



		As at		
	Jun'22	Dec'21	Jun'21	
	S\$M	S\$M	S\$M	
Property, Plant & Equipment	39.5	26.1	26.1	
Right-Of-Use Assets	37.6	17.8	11.7	
Intangible Assets	111.1	96.9	95.4	
Cash	180.9	216.2	70.9	
Current Assets less Current Liabilities	359.8	314.9	169.2	
Total Assets	828.6	710.5	423.4	
Financial Liabilities	97.4	81.3	67.4	
Shareholders' Equity	475.1	402.5	247.0	
in SG Cents				
NTA per share	117.4	98.3	53.7	
NAV per share	151.8	130.0	87.6	
Debt/ Equity	0.1x	0.2x	0.2x	



#### **Highlights**

#### **Net Current Assets (+S\$44.9M)**

Increased mainly from:

- Higher trade receivables resulting from higher sales activities
- Higher inventory level in 1H2022 to ensure parts and components availability for upcoming delivery

#### **Shareholders' Equity (+S\$72.6M)**

Increased due to profit contribution in 1H2022 of S\$83.1M partially offset by dividends paid in May '22 of S\$15.5M

1H2022 Source and Applications of Funds
Negative change in working capital resulted from higher inventory level to ensure parts and components availability for future delivery



**Operating Activities** Inflow: S\$28.4M

**Investing Activities** Outflow: S\$26.1M

**Financing Activities** Outflow: S\$36.6M

S\$M	1H2022	1H2021
Beginning Cash	216.2	134.8
PAT	83.1	29.7
Depreciation & Amortisation	10.8	5.8
Changes in working capital & others	(65.5)	(48.2)
Capital expenditure and others	(7.1)	(1.3)
Addition of intangible assets	(7.0)	(3.3)
Acquisition of investments	(12.0)	(80.9)
Share buyback	(3.1)	(2.5)
Proceeds from ESOS exercised	0.1	1.5
Dividends paid	(15.5)	(11.2)
Borrowings & other financing, net	(18.1)	46.8
Effect of FX translation	(1.0)	(0.2)
Ending Cash	180.9	70.9
Net Cash	121.3	15.3



#### **Highlights**

Lower cash balance of S\$180.9M (decreased by S\$35.3M), largely due to:

- Financing Activities outflow of S\$36.6M mainly due to:
  - Final dividends paid for FY2021
  - Repayment of borrowings
- Investing Activities outflow of S\$26.1M mainly due to:
  - Investment in Nestek
  - CAPEX spent and others
- Offset by Operating Activities inflow of S\$28.4M due to:
  - Profit contribution of S\$83.1M; offset by
  - · Higher receivables balance due to higher revenue recorded in 1H2022, and collection expected in 3Q2022
  - Higher inventory level in 1H2022 to ensure parts and components availability for upcoming delivery



# Thank You

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